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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Christopher Keith

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EXAMINER

SUBRAMANIAN, NARAYANSWAMY

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/803,615	Applicant(s) KEITH, CHRISTOPHER	
	Examiner Narayanswamy Subramanian	Art Unit 3695	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 28-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 28-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This office action is in response to applicant's communication of April 13, 2009.

Amendments to claims 1, 28-46, 48 and 49 and addition of claims 50-54 have been entered. The objections to the specification, rejections made under 35 USC 112, first paragraph and rejections under 35 USC 101 in the last office action are withdrawn in view of the amendments. Claims 1-10 and 28-54 are pending and have been examined. The rejections and response to arguments are stated below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 51-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim limitations in claims 51-54 use the phrase "means for" or "step for", but they are modified by some structure, material, or acts recited in the claims. It is unclear whether the recited structure, material, or acts are sufficient for performing the claimed function which would preclude application of 35 U.S.C. 112, sixth paragraph. For instance in claim 51 in the limitation, "means for automatically causing a portion or all of an order to be simultaneously available for execution in both a first market and a second market, wherein the first and second markets each have a plurality of market participants and are each separately capable of executing trades between their respective market participants, and wherein the same portion or all of the order is simultaneously available to the market participants in each of the respective first and second

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markets to complete a trade” the phrase “means for” is modified by sufficient structure, material or acts for achieving the specified function.

If applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that the phrase “means for” or “step for” is clearly **not** modified by sufficient structure, material, or acts for performing the claimed function. If applicant does **not** wish to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim so that it will clearly not be a means (or step) plus function limitation (e.g., deleting the phrase “means for” or “step for”). Dependent claims 52-54 are rejected based on similar reasoning and by way of dependency on a rejected claim.

The rejections given below are interpreted in light of these 112, second paragraph rejections.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 28-37 and 48 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory Subject matter.

35 USC 101 requires that in order to be patentable the invention must be a “**new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof**” (emphasis added).

Claims 28-37 and 48 of the disclosed invention is inoperative and therefore lacks utility.

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Claims 28-37 and 48 are drawn to “a computer system configured to operate an internal market, comprising: an order routing computing component in combination with an order execution computing component”. The routing computing component and the execution computing component are interpreted broadly to be software components. These claims merely recite elements of a system (“components” correspond to software program elements and not tangible hardware components) without showing any ability to realize functionality of the recited elements (i.e. functional descriptive material per se) and therefore is rendered inoperative lacking any utility. Note that a computer (or software program) code cannot by itself perform the underlying function until it is loaded on some computer readable memory and accessed by the computer (or a processor). Functional descriptive material, per se, is not statutory. This is exemplified in *In re Warmerdam* 31 USPQ2d 1754 where the rejection of a claim to a disembodied data structure was affirmed. Thus a claim to a data structure, per se, or other functional descriptive material, including computer programs, per se, is not patent eligible subject matter.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference

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claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 4, 28, 38 and 51 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, 28, 31 and 32 respectively of U.S. Patent No. 7,539, 638 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other. For instance claim 1 of the patent recites essentially all the limitations of claim 1 of the instant application. Similarly the features claimed in claims 4, 28, 38 and 51 of the instant application are found in claims 9, 28, 31 and 32 respectively of the patent.

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 28, 38, 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (US Pub No. 2002/0138390 A1) in view Lupien et al. (US Patent 5,101,353).

Claims 1, 28 and 38, May discloses a method using a software process executing on a computer, a system and a computer-accessible medium having executable instructions stored thereon for operating an internal market, the method comprising: automatically, causing a portion or all of an order to be simultaneously available for execution in both the internal market and an external market, wherein the internal and external markets each have a plurality of market participants and are each separately capable of executing trades between the market participants, and wherein, the same portion or all of the order is simultaneously available to the market participants in each of the respective internal and external markets to complete a trade (See the entire disclosure of May especially Paragraphs 28, 31, 72, 109, 120-131, 258-265); and automatically controlling execution of the order such that the simultaneously available portion or all of the order is executed in at most one of the internal market and the external market, (See the entire disclosure of May especially Paragraphs 28, 31, 72, 109, 120-131, 258-265).

May does not explicitly teach the step of automatically controlling execution of the order.

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Lupien teaches the feature of automatically controlling execution of the order (See Lupien Abstract, column 2 lines 60-67, column 3 lines 1-14, column 5 lines 63-67, column 6 line 1 - column 7 line 67, column 17 lines 63-67 and column 18 lines 1-49).

It would have been obvious to one of ordinary skill in the art to include these features taught by Lupien to the invention of May. The combination of disclosures would have helped an investor to realize the best possible prices for his/her transaction in the most time efficient manner.

Claims 47-49, May teaches the features of operating the internal market according to a two-phase protocol in which in a first phase, permission is obtained from a controlling process to execute the order, and in a second phase, the order is executed only if permission from the controlling process is obtained (See the entire disclosure of May especially Paragraphs 72-73, 109, 114, 258-289). Maintaining control of the trading process implies these features.

10. Claims 2-10, 29-37, 39-46 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (US Pub No. 2002/0138390 A1) in view Lupien et al. (US Patent 5,101,353) and further in view of Korhammer et al. (US Patent 6,278,982 B1).

Claims 2-6, 9-10, 29-33, 36-37, 39-43 and 46, Korhammer teaches the steps of automatically synchronizing performance of an operation at the internal market and the external market (See Korhammer Column 12 lines 7-30, coordination of split orders implies synchronization); causing a transaction performed in one of the internal and external markets to be performed in the other of the internal and external markets, the transaction being an operation to cancel or a post an order (See Korhammer Column 12 lines 7-30, causing a transaction to be performed is interpreted as intended use); causing an execute operation performed in one of the

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internal and external markets to cause a cancel operation to be performed in the other of the internal and external markets (See Korhammer Column 12 lines 7-30, to cause a cancel operation is interpreted as intended use); conditionally performing an operation in one of the internal and external markets, and performing the conditional operation after receiving confirmation from the other of the internal and external markets that the operation has been communicated to the other of the internal and external markets (See Korhammer Column 12 lines 7-30); providing a mechanism for coupling the internal and external markets such that only one of the internal and external markets maintains the order for execution by a market participant at either of the internal market or the external market (See Korhammer Column 11 lines 54-67, for execution by a market participant at either of the internal market or the external market is interpreted as intended use); re-synchronizing an order book containing orders at each of the internal and external markets before decoupling the internal and external markets, wherein the markets, once decoupled, are capable to separately facilitate an exchange between market participants (See Korhammer Column 12 lines 7-30, wherein the markets, once decoupled, are capable to separately facilitate an exchange between market participants is interpreted as intended use); the automatically ensuring is performed using a software process executing on a computer platform that communicates between the internal market and the external market (Inherent in the disclosure of Korhammer).

Claims 7-8, 34-35, 44-45 and 50, May does not explicitly teach the steps wherein when one of the internal and external markets is in fast symbol mode, the other of the internal and external markets operates as a router and routes orders to the market in fast symbol mode without posting the order at the other of the internal and external markets and wherein an order can be

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executed at only the market in fast symbol mode, causing the portion or all of the order that was posted in an order book maintained by one of the internal and external markets to be simultaneously posted in an order book maintained by the other of the internal and external markets.

Official notice is taken executing orders in a market with short latencies, routing the orders to such markets with short latencies, adjusting the orders in the markets before separating the execution in the markets and causing the portion or all of the order that was posted in an order book maintained by one of the internal and external markets to be simultaneously posted in an order book maintained by the other of the internal and external markets are old and well known in the art. These actions help an investor to realize the best possible prices for his/her transaction in the most time efficient manner.

It would have been obvious to one of ordinary skill in the art to include these features to the invention of May. The combination of disclosures would have helped an investor to realize the best possible prices for his/her transaction in the most time efficient manner.

Response to Arguments

11. Applicant's arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are listed on the enclosed form PTO-892.

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13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Narayanswamy Subramanian whose telephone number is (571) 272-6751. The examiner can normally be reached Monday-Thursday from 8:30 AM to 7:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles R. Kyle can be reached at (571) 272-6746. The fax number for Formal or Official faxes and Draft to the Patent Office is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Narayanswamy Subramanian/

Primary Examiner

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July 4, 2009